

Appl. No. 10/699,263
Amdt. Dated 12/21/2004
Response to Office action dated 09/21/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-2 (Canceled): A single phase motor driving unit comprising:

Claim 3 (Currently amended): ~~The A~~ single phase motor driving unit according to claim 1, further comprising:

a first driving transistor supplying a single phase coil with a driving electric current in a certain direction;

a second driving transistor supplying said single phase coil with a driving electric current in the opposite direction with respect to the certain direction;

a recirculating section which recirculates the driving electric current for said single phase coil by controlling on-off timings of said first driving transistor and said second driving transistor in a predetermined period immediately after the direction of the driving electric current for said single phase coil changes; and

a comparison section which compares an absolute a value of a sine wave signal obtained from a Hall device detecting a rotational position of a single phase motor and a reference value and outputs a timing signal corresponding to said predetermined period,

wherein said recirculating section controls on-off timings of said first driving transistor and said second driving transistor based on said timing signal.

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Claim 4 (Currently amended): The A single phase motor driving unit according to claim 1, further comprising:

a first driving transistor supplying a single phase coil with a driving electric current in a certain direction;

a second driving transistor supplying said single phase coil with a driving electric current in the opposite direction with respect to the certain direction;

a recirculating section which recirculates the driving electric current for said single phase coil by controlling on-off timings of said first driving transistor and said second driving transistor in a predetermined period immediately after the direction of the driving electric current for said single phase coil changes; and

a detecting section which detects rotation and stop of said single phase motor and outputs a rotation signal and a stop signal,

wherein when said single phase motor cannot start, said recirculating section stops recirculating the driving electric current for said single phase coil until the output of said detecting section changes from the stop signal to the rotation signal.

Claim 5 (Canceled)

Claim 6 (Currently amended): The single phase motor driving unit according to claim 2 3, further comprising:

a detecting section which detects rotation and stop of said single phase motor and outputs a rotation signal and a stop signal,

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wherein when said single phase motor cannot start, said recirculating section stops recirculating the driving electric current for said single phase coil until the output of said detecting section changes from the stop signal to the rotation signal.

Claims 7-8 (Canceled)

Claim 9 (Currently amended): An integrated circuit including a single phase motor driving unit according to any one of claims 1 through 7 3, 4 and 6.

Claims 10-13 (Canceled)

Claim 14 (New): A method of driving a single phase motor in a single phase motor driving unit which has a first driving transistor supplying a single phase coil with a driving electric current in a certain direction and a second driving transistor supplying said single phase coil with a driving electric current in the opposite direction with respect to the certain direction, comprising:

recirculating the driving electric current for said single phase coil by controlling on-off timings of said first driving transistor and said second driving transistor in a predetermined period immediately after the direction of the driving electric current for said single phase coil changes; and

comparing a value of a sine wave signal obtained from a Hall device detecting a rotational position of a single phase motor and a reference value and outputting a timing signal corresponding to said predetermined period,

wherein on-off timings of said first driving transistor and said second driving transistor are controlled based on said timing signal.

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Claim 15 (New): A method of driving a single phase motor in a single phase motor driving unit which has a first driving transistor supplying a single phase coil with a driving electric current in a certain direction and a second driving transistor supplying said single phase coil with a driving electric current in the opposite direction with respect to the certain direction, comprising:

recirculating the driving electric current for said single phase coil by controlling on-off timings of said first driving transistor and said second driving transistor in a predetermined period immediately after the direction of the driving electric current for said single phase coil changes; and
detecting rotation of said single phase motor and outputting a rotation signal;
detecting stop of said single phase motor and outputting a stop signal,
wherein when said single phase motor cannot start, recirculation of the driving electric current for said single phase coil is stopped until the rotation signal is outputted.